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PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q68763

Yasuhiko KOSUGI

Appln. No.: 10/070,125

Group Art Unit: 2853

Confirmation No.: 9677

Examiner: Lam S. NGUYEN

Filed: March 1, 2002

For: INK JET RECORDING APPARATUS

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. Please charge the statutory fee of \$500.00 and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER


Grant K. Rowan
Registration No. 41,278

Date: October 16, 2006



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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

The real party in interest is SEIKO EPSON CORPORATION by virtue of an assignment executed by Yasuhiko Kosugi on February 8, 2002 and recorded in the U.S. Patent and Trademark Office on March 1, 2002 at reel 012858 and frame 0877.

II. RELATED APPEALS AND INTERFERENCES

Upon information and belief, there are no other prior or pending appeals, interferences or judicial proceedings known to Appellant or Appellant's Representative that may be related to, be directly affected by, or have a bearing on the Board's decision in the Appeal.

III. STATUS OF CLAIMS

Claims 11, 12, 14-21, and 23-28 are pending, stand rejected, and are the basis of this Appeal. A copy of the claims are contained in the Claims Appendix.

IV. STATUS OF AMENDMENTS

Appellant did not amend the claims in response to the final Office Action dated October 17, 2005. Accordingly, all amendments, which have been made during prosecution of the present application, are reflected in the attached Claims Appendix.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Claim 11 relates to an ink jet recording apparatus. In an illustrative, non-limiting embodiment shown in Figs. 1 to 3 of the present application, the apparatus comprises a recording head 6, a carriage 1, and a communication unit 51 and 52. (Page 4, lines 12-14; page 5, lines 3-8; page 6, line 36, to page 7, line 8).

The recording head 6 jets ink drops to record, and the carriage 1 is adapted to be loaded with a plurality of detachable ink containers 7a and 7b. (Page 2, lines 25-33; page 4, lines 12-14). Furthermore, each of the containers 7a and 7b stores ink to be fed to the recording head 6, and the carriage 1 reciprocally moves with the recording head. (Figs. 1 to 2C; page 2, lines 27-29; page 4, lines 14-15 and 20-33; page 9, lines 1-10).

As shown in Fig. 3, the communication unit 51 and 52 including a single antenna 52 for communicating with storage elements 53a and 53b which are provided with the ink containers 7a and 7b, respectively. (Page 5, line 20, to page 6, line 5). Furthermore, the communication unit 51 and 52 is able to communicate with the storage elements 53a and 53b provided with the ink containers 7a and 7b not only when the ink containers 7a and 7b are loaded on the carriage 1, but also when the ink containers 7a and 7b are not loaded on the carriage. (Page 5, line 3, to page 6, line 21; page 9, line 33, to page 10, line 15).

Also, in a state that one ink container 7a of the ink containers 7a and 7b is loaded on the carriage 1, the communication unit 51 and 52 is able to communicate with one storage element 53a of the storage elements 53a and 53b for the one ink container only when the one storage element 53a is brought close to the communication unit 51 and 52. (Page 5, line 20, to page 6,

line 5; page 7, lines 9-15). Also, the communication between the communication unit 51 and 52 and the one storage element 7a is enabled at least during a portion of said reciprocal movement. (Figs. 1 to 2C; page 5, line 20, to page 6, line 5).

Furthermore, in a state that the one ink container 7a is not loaded on the carriage 1, the communication unit 51 and 52 is able to communicate with the one storage element 53a only when the one storage element 53a is brought close to the communication unit 51 and 52 to such a distance that the one storage element 53a is able to communicate with the communication unit 51 and 52 in the state that the one ink container 7a is loaded on the carriage 1. (Page 5, lines 14-19; page 6, lines 10-21; page 7, lines 9-15; page 9, lines 17-24; page 9, line 33, to page 10, line 15).

In a non-limiting implementation of claim 11, enabling the communication unit 51 and 52 to communicate with the storage element 53a when the cartridge 7a is not mounted on the carriage 1 has certain advantages. For example, the storage element 53a of the cartridge 7a may store information relating to the ink contained in the cartridge 7a. By reading this information from the storage element 53a before the cartridge 7a is mounted on the carriage 1, the recording apparatus can determine whether or not the ink within the cartridge 7a is compatible with the apparatus before the cartridge 7a is mounted. If the cartridge 7a is not compatible, the printing apparatus can alert a user before he or she mounts the cartridge 7a to the carriage 1 and unnecessarily consumes ink from the cartridge 7a. (Page 7, line 35, to page 8, line 3; page 9, lines 11-24; page 9, line 33, to page 10, line 15).

Also, claim 20 relates to an ink jet recording apparatus. In an illustrative, non-limiting embodiment shown in Figs. 1 to 3 of the present application, the apparatus comprises a recording

head 6, a carriage 1, and a communication circuit 51 and 52. (Page 4, lines 12-14; page 5, lines 3-8; page 6, line 36, to page 7, line 8). Also, the carriage 1 reciprocally moves with the recording head 6, and a plurality of ink containers 7a and 7b are detachably mounted on the carriage 1. (Figs. 1 to 2C; page 2, lines 27-29; page 4, lines 12-15 and 20-33). Also, the ink containers 7a and 7b comprise memories 53a and 53b, respectively. (Fig. 3; page 5, line 20, to page 6, line 5; page 7, lines 1-15).

Also, the communication circuit 51 and 52 includes a single antenna 52 that communicates with the memories 53a and 53b provided when the ink containers 7a and 7b are mounted on the carriage 1 and when the ink containers 7a and 7b are not mounted on the carriage 1. (Page 5, line 3, to page 6, line 5; page 6, lines 10-21; page 7, lines 9-15; page 9, lines 17-24; page 9, line 33, to page 10, line 15). Also, when one ink container 7a of the ink containers 7a and 7b is mounted on the carriage 1, the communication circuit 51 and 52 communicates with one memory 53a of the memories 53a and 53b when the carriage 1 moves the one memory 53a close to the communication circuit 51 and 52. (Page 5, lines 20-27; page 7, lines 9-15; page 9, line 33, to page 10, line 15).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 11, 12, 14-17, 20, 21, and 23-26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,049,898 to Arthur et al. (“Arthur”) and U.S. Patent No. 6,312,106 to Walker (“Walker”)

2. Claims 18, 19, 27, and 28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Arthur, Walker, and U.S. Application 2002/0015066 to Siwinski et al. (“Siwinski”)

VII. ARGUMENT

Claims 11, 12, 14-21, and 23-28 stand rejected under 35 U.S.C. § 103(a).

A. Rejection under 35 U.S.C. § 103(a) over U.S. Patent No. 5,049,898 to Arthur et al. (“Arthur”) and U.S. Patent No. 6,312,106 to Walker (“Walker”)

Claims 11, 12, 14-17, 20, 21, and 23-26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Arthur and Walker. Appellant submits that the claims are patentable over the cited references.

1. Claim 11

a. One skilled in the art would not have been motivated to combine the teachings of Arthur and Walker

Appellant submits that claim 11 is patentable over Arthur and Walker because one skilled in the art would not have been motivated to combine the teachings of the cited references.

For example, Fig. 2 of Arthur shows a printing apparatus 10 that has three printing assemblies 12, which contain three memory elements 14, respectively, and which are mounted on the carriage 34. The apparatus 10 also has a single read/write head 44 that reads information from, and writes information to, the elements 14.

As the carriage 34 moves back and forth across the recording medium, the head 44 reads (or writes) information from (or to) with the first memory 14 of the first printing assembly 12 when the assembly 12 passes by the head 44. Similarly, the head 44 sequentially reads (or writes) information from (or to) with the second and third memories 14 of the second and third printing assemblies 12 as they pass by the head 44. (Column 3, lines 39-61). Since the printing apparatus 10 only has a single head 44, Arthur clearly teaches that the three printing assemblies

12 must move with respect to the head 44 in order for the head 44 to exchange information with each of the three memories 14.

Fig. 6 of Walker shows a printing system 10 having a printer portion 12 and a plurality of ink containers 18 (one of which is shown in the figure). The containers 18 respectively have memories 54 (Fig. 3) and linking devices 38, and the printer portion 12 has a plurality of linking devices 42 that respectively correspond to the linking devices 38. (Column 4, lines 45-54). The printer portion 12 reads data from and writes data to a first memory 54 of a first ink container 18 by establishing a communication link between the linking device 38 on the first ink container 18 and the corresponding linking device 42 in the printer portion 12.

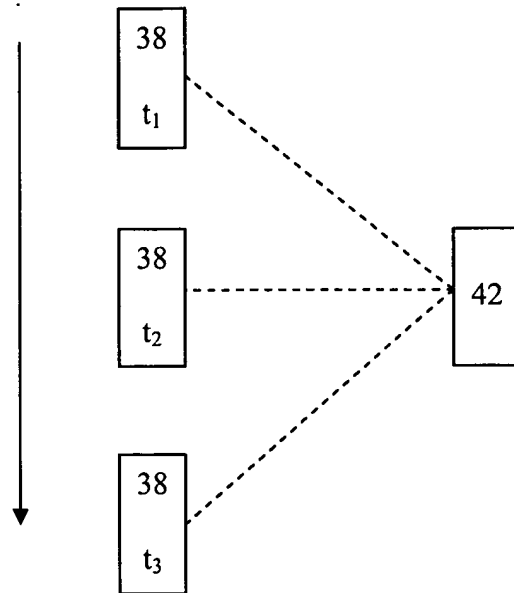
Furthermore, unlike Arthur, Walker expressly teaches that the linking devices 38 (on the ink containers 18) do not move relative to the their corresponding linking devices 42 (on the printer portion 12) in order to establish a reliable communication link between the devices 38 and 42, to conserve power, to eliminate noise, and to reduce costs. (Column 8, lines 34-40; column 8, line 66, to column 9, line 7; column 9, lines 42-56). Since the linking devices 38 and 42 do not move with respect to each other, the printing portion 12 has multiple linking devices 42 to respectively communicate with the multiple linking devices 38 on the containers 18. (Column 4, lines 45-54).

On page 6 of the final Office Action dated October 17, 2005, the Examiner acknowledges that Walker suggests holding the linking device 38 stationary with respect to the linking device 42 to “optimize” the information exchange between them. However, he contends that Walker does not require the linking devices 38 and 42 to be stationary with respect to each other to

exchange information, because as long as the device 38 moves within the capture region 74 of the device 42 and has the proper orientation with respect to the device 42, the devices 38 and 42 can adequately communicate with each other.

Appellant disagrees that Walker contains any teaching that the devices 38 and 42 can adequately exchange information when they move with respect to each other. For example, column 8, lines 2-6, of the reference states that the linking devices 38 and 42 can communicate when “positioning the linking device 38 within [the] capture region 74 with the proper orientation to the linking device 42.” The fact that Walker states that the device 38 can communicate with the device 42 when it is “positioned” in the capture region 74 does not suggest that the devices 38 and 42 can communicate when the device 38 “moves through” or “moves within” the region 74. Moreover, the express statements at column 8, lines 34-40; column 8, line 66, to column 9, line 7; and column 9, lines 42-56, indicate that the devices 38 and 42 cannot communicate adequately when the device 38 moves with respect to the device 42.

Moreover, the fact that the device 38 can only exchange information with the device 42 when it is properly “oriented” with respect to the device 42 suggests that it cannot exchange information when it moves relative to the device. For example, assume that the device 38 moves with respect to the device 42, as the arrow indicates in the figure below.



At time t_1 , the right surface of the linking device 38 is offset from the left surface of the linking device 42 and is effectively angled at -45 degrees with respect to the surface of the device 42. Then, at time t_2 , the surface of the linking device 38 directly faces the surface of the linking device 42 and effectively forms an angle of zero degrees with respect to the surface of the device 42. Finally, at time t_3 , the surface of the linking device 38 is offset from the surface of the linking device 42 and is effectively angled at +45 degrees with respect to the surface of the device 42.

As illustrated above, the orientation of the linking device 38 constantly changes when the device 38 moves with respect to the linking device 42. Thus, since the devices 38 and 42 must be precisely oriented with respect to each other to exchange information, they cannot communicate adequately when the device 38 moves relative to the device 42.

Accordingly, one skilled in the art would not have been motivated to substitute the linking devices 38 in Walker for the memories 14 in Arthur and substitute the linking device 42

in Walker with the head 44 in Arthur. Specifically, if one incorporated the devices 38 and 42 into the Arthur device, the devices 38 (corresponding to the memories 14) would have to move relative to the device 42 (corresponding to the head 44), and thus, the devices 38 and 42 would not be able to reliably exchange information.

b. Even assuming *arguendo* that the teachings of the references are combined, the combined teachings do not suggest all of the features of claim 11

Even if one skilled in the art combined the teachings of Arthur and Walker, Appellant submits that the combined teachings of the references do not suggest the claimed invention. For example, claim 11 states that a communication unit is able to communicate with storage elements provided on ink containers not only when the ink containers are loaded on a carriage, but also when the ink containers are not loaded on the carriage.

The Examiner acknowledges that Arthur does not suggest the claimed communication unit but maintains that Walker does. For example, on page 6 of the final Office Action, the Examiner argues that column 8, lines 1-6, of the reference states that the linking devices 38 and 42 can reliably communicate when the device 38 is positioned within the capture region 74 and is properly oriented with respect to the device 42. Thus, the Examiner contends that if the ink container 18 (with the linking device 38) is not loaded on the printing portion 12, the device 38 can still communicate with the device 42, as long as it is properly positioned and oriented.

Appellant respectfully submits that the Examiner's position is flawed because Walker teaches that the device 38 is properly positioned and oriented only when it is loaded on the printing portion 12. For example, as shown in Fig. 6, the device 38 can only be properly oriented

(*i.e.*, directly facing) the device 42 at a proper position (*i.e.*, distance) when the container 18 is loaded in the docking station 24. (*See also* column 8, lines 23-44). Other portions of Walker likewise suggest that the container 18 must be installed for the devices to communicate properly. (Column 3, lines 50-54; column 4, lines 7-10; column 4, line 64, to column 5, line 7).

Since the Examiner acknowledges that Arthur does not suggest the claimed communication unit and since Walker does not suggest the claimed device for the reasons presented above, Appellant submits that claim 11 is patentable over the references.

2. Claims 12 and 14-17

Since claims 12 and 14-17 depend upon claim 11, Appellant submits that they are patentable at least by virtue of their dependency.

3. Claim 20

Since claim 20 includes features that are similar to the features discussed above in conjunction with claim 11, Appellant submits that it is patentable at least for similar reasons.

4. Claims 21 and 23-26

Since claims 21 and 23-26 depend upon claim 20, Appellant submits that they are patentable at least by virtue of their dependency.

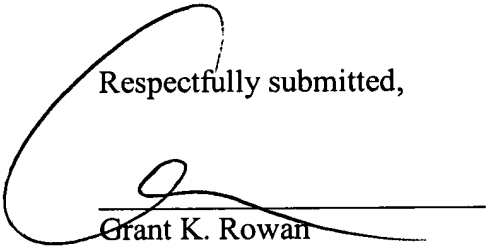
B. Rejection under 35 U.S.C. § 103(a) over Arthur, Walker, and U.S. Application 2002/0015066 to Siwinski et al. ("Siwinski")

Claims 18, 19, 27, and 28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Arthur in view of Walker, and further in view of Siwinski. Since claims 18, 19, 27, and 28 depend upon claim 11 or 20, and since Siwinski does not cure the deficient teachings of Arthur and Walker with respect to claims 11 and 20, Appellant submits that claims 18, 19, 27, and 28 are patentable at least by virtue of their dependency.

C. Conclusion

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Grant K. Rowan
Registration No. 41,278

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: October 16, 2006

CLAIMS APPENDIX

CLAIMS 11, 12, 14-21, and 23-28 ON APPEAL:

11. (rejected):/An ink let recording apparatus comprising:
- a recording head that jets ink drops to record,
- a carriage adapted to be loaded with a plurality of detachable ink containers each of which stores ink to be fed to said recording head, wherein said carriage reciprocally moves with said recording head, and
- a communication unit including a single antenna for communicating with storage elements which are provided with said ink containers, respectively, said communication unit being able to communicate with said storage elements provided with said ink containers not only when said ink containers are loaded on said carriage, but also when said ink containers are not loaded on said carriage,
- wherein in a state that one ink container of said ink containers is loaded on said carriage, said communication unit is able to communicate with one storage element of said storage elements for said one ink container only when said one storage element is brought close to said communication unit, said communication between said communication unit and said one storage element being enabled at least during a portion of said reciprocal movement and,
- wherein in a state that said one ink container is not loaded on said carriage, said communication unit is able to communicate with said one storage element only when said one storage element is brought close to said communication unit to such a distance that said one

storage element is able to communicate with said communication unit in the state that said one ink container is loaded on said carriage.

12. (rejected): An ink jet recording apparatus according to Claim 11, wherein said communication unit communicates with said one storage element for the one ink container in a non-contact state.

14. (rejected): An ink jet recording apparatus according to Claim 12, wherein power is supplied to said one storage element for said one ink container in a non-contact state.

15. (rejected): An ink jet recording apparatus according to Claim 11, wherein information within said one storage element for said one ink container can be rewritten and stored in said one storage element at least via said communication unit reading and writing.

16. (rejected): An ink jet recording apparatus according to Claim 11, further comprising a storage element for said recording head installed in said recording head for storing information concerning said recording head, wherein said communication unit communicates also with said storage element for said recording head.

17. (rejected): An ink jet recording apparatus according to Claim 16, wherein said communication unit communicates with said storage element for said recording head in a non-contact state.

18. (rejected): An ink jet recording apparatus according to Claim 11, wherein said communication unit communicates also with a storage element for a recording medium installed in a package of storage medium to be recorded by said ink jet recording apparatus.

19. (rejected): An ink jet recording apparatus according to Claim 18, wherein said communication unit communicates with said storage element for said recording medium in a non-contact state.

20. (rejected): An ink jet recording apparatus comprising:
a recording head;
a carriage, which reciprocally moves with the recording head and on which a plurality of ink containers are detachably mounted, wherein the ink containers comprise memories, respectively; and
a communication circuit including a single antenna that communicates with the memories provided when the ink containers are mounted on the carriage and when said ink containers are not mounted on the carriage,

wherein, when one ink container of the ink containers is mounted on the carriage, the communication circuit communicates with one memory of the memories when the carriage moves the one memory close to the communication circuit.

21. (rejected): An ink jet recording apparatus according to Claim 20, wherein said communication circuit communicates with the one memory in a non-contact state.

23. (rejected): An ink jet recording apparatus according to Claim 21, wherein power is supplied to the one memory in the non-contact state.

24. (rejected): An ink jet recording apparatus according to Claim 20, wherein the communication circuit can read information from and write information to the one memory.

25. (rejected): An ink jet recording apparatus according to Claim 20, wherein the recording head comprises a head memory that stores information concerning the recording head, wherein said communication circuit communicates with the head memory.

26. (rejected): An ink jet recording apparatus according to Claim 25, wherein the communication circuit communicates with the head memory in a non-contact state.

27. (rejected): An ink jet recording apparatus according to Claim 20, wherein a recording medium that receives information recorded via the recording head is stored in a package,

wherein the package comprises a recording medium memory, and

wherein the communication circuit communicates with the recording medium memory.

28. (rejected): An ink jet recording apparatus according to Claim 27, wherein the communication circuit communicates with the recording medium memory in a non-contact state.

APPEAL BRIEF UNDER 37 C.F.R. §41.37
U.S. Appln. No. 10/070,125

Attorney Docket No. Q68763

EVIDENCE APPENDIX:

NONE.

APPEAL BRIEF UNDER 37 C.F.R. §41.37
U.S. Appln. No. 10/070,125

Attorney Docket No. Q68763

RELATED PROCEEDINGS APPENDIX

NONE.